REMARKS

Claims 1-5 are pending in this application. Claim 1 has been amended. Support for the amendment to Claim 1 may be found generally throughout the specification, and specifically within paragraph [0042]. No new matter has been added by virtue of this amendment.

Claim Rejection – 35 USC Sect 103(a)

Claims 1-5 stand rejected under 35 USC 103(a) as being unpatentable over Oldenburg et al. in view of the combination of Lambert et al. and Mukhopadhyay et al. The Examiner basically alleges that it would be obvious to one of ordinary skill in the art to use the polypeptide inhibitors disclosed by Lambert in the method of Oldenburg to facilitate the high level production of purified peptide. The Examiner additionally alleges that one of ordinary skill in the art would have been motivated to use the inclusion body purification protocols of Mukhopadhyay in the Oldenburg procedure. Applicants respectfully traverse and overcome this rejection.

Oldenbury recites a method for the production/expression of a specific recombinant parathyroid (PTH) analog from E. coli using a specified procedure. Applicants respectfully note that Oldenburg explicitly states that its method requires the substitution of methionine residues with non-cleavable residues (as it uses CNBr) to cleave. Oldenburg further limits the applicability of its procedure with regard to other proteins:

> [t]his method is restricted, of course, to those peptides which are tolerant of the deletion or replacement of methionine residues. In addition, the peptide will also contain a homoserine or homoserine lactone at the carboxyl-terminus which…may also compromise {the peptide's} bioactivity and may pose difficulties if a free carboxyl terminus is needed for peptide activity". Pg 283

Additionally, as part of its method, Oldenburg requires washing the isolation bodies at ph 7.5 and with 100 ml of 10mM Tris-HCl with 100ml of WTEK (100mM KCl), then resuspension in 10 ml of 10% SDS to solubilize and even sonification of the

sample "was necessary to solubilize all of the protein". Binding buffer is then added. (See page 281).

Thus, Oldenburg acknowledges the restriction of its process to certain proteins, acknowledges the presence of a homoserine/homoserine lactone which may compromise the bioactivity of the protein and thus would require an additional modification step to obtain the unmodified protein, and finally requires that the washing step at a pH of 7.5.

Applicants' Claim 1, as amended, specifically recites:

> A process for the recombinant production of an antifusogenic peptide by expression of a nucleic acid encoding the antifusogenic peptide as a repeat peptide in a microbial host cell to form inclusion bodies which comprise said repeat peptide, comprising the steps of washing the inclusion bodies with 5.5 to 8.0 mol/l of a denaturing agent at a pH value of at or below pH 6.5, solubilizing the washed inclusion bodies at a pH value of at least pH 9, and cleaving said repeat peptide to obtain said antifusogenic peptide, wherein the antifusogenic peptide contains a glycine at its C-terminus.

Thus, in comparison to Oldenburg, Applicants' method differs in at least three (3) claimed elements. Applicants' procedure involves in contrast:

1) No additional modification step is needed to obtain the unmodified protein (Oldenburg would require an additional modification step to eliminate the homoserine or homoserine lactone caused by its procedure);

2) A washing step of at or below pH 6.5 (Oldenburg requires pH 7.5); and

3) A resultant antifusogenic peptide with a glycine at its C-terminus (Oldenburg doesn't even teach antifusogenic peptides; Oldenburg's method further results in the presence of the homoserine/homoserine lactone at the carboxyl terminus).

Applicants respectfully submit that Oldenburg teaches away from the claimed invention. Oldenburg teaches a washing step of pH 7.5, teaches the presence of the homoserine/homoserine lactone at the carboxyl terminus, and teaches that an additional modification step would be necessary. Additionally, Oldenburg teaches that

its method is restricted and would not be applicable to all peptides, specifically those peptides which are not tolerant to the deletion or replacement of methionine residures and those peptides whose bioactivity would be compromised by a homoserine/homoserine lactone at the carboxyl terminus. One of ordinary skill in the art would not therefore be motivated to modify the admitted limitations of Oldenburg.

The addition of Lambert et al does not address any of the limitations and deficiencies of Oldenburg. Lambert is silent as to washing steps, carboxyl-terminus residues or modification steps. The combination of Lambert with Oldenburg thus does not teach, suggest or motivate one of ordinary skill in the art to arrive at Applicants' claimed invention.

Finally, the addition of Mukohopadhyay likewise does not address any of these differences. There is no motivation shown to modify the pH in the washing step of Oldenburg. Furthermore, Mukohopadhyay, like Lambert, is silent as to the presence of carboxyl-terminus resides or modification steps. The combination of Mukohopadhyay with Lambert with Oldenburg thus does not teach, suggest or motivate one of ordinary skill in the art to arrive at Applicants' claimed invention.

Conclusion

Therefore, Applicants submit that the combination of Oldenburg with Lambert with Mukohopadhyay does not teach, suggest or disclose at least two elements of Claim 1: washing at a pH less than or equal to 6.5 and the presence of glycine at the C-terminus. In addition, the combination of Oldenburg with Lambert with Mukohopadhyay would require an additional modification step. As such, Applicants respectfully submit that the combination of Oldenburg with Lambert with Mukohopadhyay would not anticipate, nor render obvious, each and every element and step of Applicants claimed invention. Applicants respectfully request the 103(a) rejection be withdrawn and Claims 1-5, as amended, be hereby placed into condition for allowance.

No further fee is required in connection the filing of this Amendment. If any additional fees are deemed necessary, authorization is given to charge the amount of any such fee to Deposit Account No. 08-2525.

Respectfully submitted,

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